



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,607	12/29/1999	FRED OLIVEIRA	E0295/7136	2467

7590

05/22/2003

RICHARD F GIUNTA
C/O WOLF GREENFIELD & SACKS PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 022102211

EXAMINER

POLLACK, MELVIN H

ART UNIT	PAPER NUMBER
----------	--------------

2142

8

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/474,607

Applicant(s)

OLIVEIRA ET AL.

Examiner

Melvin H Pollack

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *see attached office action*.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/18/03 have been fully considered but they are not persuasive. A detailed response appears below.
2. First, the examiner notes comments such as those on claim 4, which state things such as "examiner asserts [said item]. Applicants respectfully assert that the specification must be interpreted in the manner in which it would be understood by those of skill in the art, and that one of skill in the art would not be confused by the specification, and would understand the manner in which an out of band command operates." This may be true, and the examiner is hardly in a position to defend his expertise as pertains in the art. Indeed, he apologizes for any and all frustrations that the applicant might have suffered due to what he considers my limited faculties. The examiner does admit to having some trouble with the lexicon-heavy specification, which does make it difficult to fully grasp the scope of the invention and as such may be drawn in a variety of ways. The examiner admits to being cautious regarding this case, lest he think the case to have a different scope than it really does. (See MPEP 2111). If the applicant has a problem with my work thus far, he is allowed to lodge a complaint with my supervisor.
3. The examiner thanks the applicant for providing clarifications to the specification, which should allow one of ordinary skill in the art to better understand the invention. The examiner thanks the applicant for his indulgence in this manner.
4. The examiner withdraws the 112 rejection.
5. At present, Kikinis has been withdrawn as a 102 reference. The purpose of the response to arguments was to show my way of thinking when originally applying the reference and to

Art Unit: 2142

show that Kikinis is analogous art and therefore acceptable for combination as a 103 reference.

This document will clarify such issues as such.

6. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "out of band command") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). They do not have the definition of "path-specific operations that identify a particular path over which they will be executed."

7. Upon comparing Fig. 1 of Grun to Fig. 16 of the application, the examiner notes the similarities, using #21 as a read/write path #1501 and #24 as an out of band command path #1503. The examiner defines out of band command as a command that is "associated with control functions or the reading and writing of data OUTSIDE of the normal read/write path." As further stated on Page 3, they can be used for operational commands such as get and put, but the above allows for a wide variety of commands. Grun teaches the determination of which path to take is dependent on a descriptor (col. 3, lines 13-28) that refers to a variety of items such as an I/O request. It is anticipated that the descriptors can be chosen in such a way as to separate certain commands or data packets, which would make them out of band commands as per the definition. And since the descriptor would be based on the nature of the command or data, this mechanism would ensure that each packet identifies a particular path.

8. In regards to the 102 rejection using Lambrecht, the applicants are non-responsive.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1-3, 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Grun et al. (6,081,848).

11. For claim 1, Grun teaches a method (see abstract) of processing an out of band control command executed by a host computer in a multipath system (Fig. 1), including the host computer (Fig. 1, #10), a device (Fig. 1, #40) and multiple paths coupling the host computer to the device (Fig. 1, #30), the out of band control command further identifying, from among the multiple paths, a target path for transmission of the out of band control command between the host computer and the device (col. 1, lines 50-55), the method comprising the steps of:

- a. Selecting a selected path for transmitting out of band control command between the host computer and the device (col. 2, lines 34-40), the selected path being selected from among the multiple paths based upon a selection criteria that enables the selected

Art Unit: 2142

path to be other than the target path identified by the out of band control command (col. 3, line 66 – col. 4, line 5); and

b. Transmitting the out of band control command between the host computer and the device over the selected path (Fig. 1, #21-24).

12. Examiner notes that Fig. 1 of Grun is quite similar to Fig. 12 and 16 of the application.

13. As for claim 2, Grun teaches that the device is a data storage system (Fig. 1, #70), where the out of band control command requests access to information stored on the data storage system (col. 3, lines 13-28), and wherein the step (B) includes a step of transmitting the information between the host computer and the data storage system over the selected path (col. 4, lines 6-20).

14. As for claim 3, there is a second computer that is coupled to the data storage system, wherein the data storage system includes a shared storage region shared by the host computer and the second computer, wherein the target address specifies the shared storage region, and wherein the step (B) includes a step of transmitting the information between the host computer and the shared storage region over the selected path (col. 4, lines 52-60).

15. As for claim 7, Grun teaches the step of selecting the path based upon a state of previously assigned operations queued for transmission from the host computer to the device over the multiple paths (col. 2, lines 34-40).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 4-6, 8-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grun as applied to claims 1-3, 7 above, and further in view of Kikinis (6,289,389).

18. For claims 4 and 5, Grun teaches that the target path is selected when operational, as shown above. Kikinis teaches that a different path is automatically selected when the target path is non-operational (col. 3, lines 10-13 and col. 6, lines 19-32), without intervention of a system administrator (col. 6, line 66 – col. 7, line 10). It is well known in the art that target paths become non-operational constantly, and that fail-safe methods are always required. Therefore, at the time the invention was made, one of ordinary skill in the art would have used a Kikinis fail-safe mechanism in the Grun access method in order to handle the situation in which one or more of the paths becomes non-operational.

19. For claim 6, Grun does not expressly disclose the selection algorithm for selecting a path. Kikinis teaches the selection algorithm that distributes, among the multiple paths a load of operations passing between the host computer and the device (col. 6, lines 19-32). At the time the invention was made, one of ordinary skill in the art would have used the Kikinis selection method as a teaching on how to implement the selection method of Grun.

20. Claims 8-14 are drawn to a computer readable medium encoded with a program for execution to implement the method drawn in claims 1-7, respectively. The prior art teaches that a software implementation is functionally equivalent to the underlying method. Official notice is taken regarding the fact that a program is stored on a computer readable medium and executed on a system. Therefore, if claims 1-7 are rejected, then claims 8-14 are also rejected for the reasons above.

Art Unit: 2142

21. Claims 15-21 are drawn to a hardware system that implements the method drawn in claims 1-7, respectively. The prior art teaches that a hardware system is functionally equivalent to the underlying method. Therefore, if claims 1-7 are rejected, then claims 15-21 are also rejected for the reasons above.

22. Claim 22 is a system means claim with many of the limitations of claim 20. If claim 20 is rejected, then claim 22 is also rejected for the reasons above.

Conclusion

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin H Pollack whose telephone number is (703) 305-4641. The examiner can normally be reached on 8-4:30 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark R Powell can be reached on (703) 305 - 9703. The fax phone numbers for the

Art Unit: 2142

organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

MHP
May 19, 2003



ROBERT B. HARRELL
PRIMARY EXAMINER